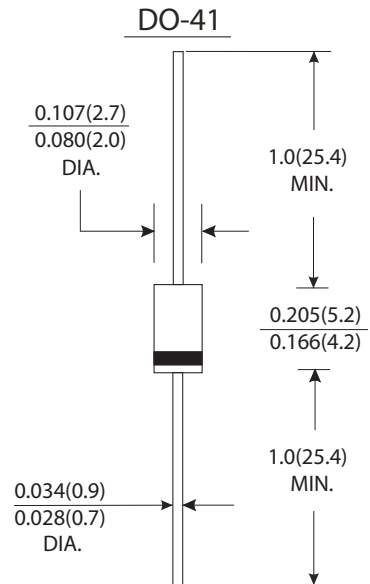


### Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed :  
250°C/10 seconds at terminals,  
0.375" (9.5mm) lead length, 5lbs. (2.3Kg) tension

### Mechanical Data

- Case : JEDEC DO-41 molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.012 ounce, 0.33 gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SB120	SB130	SB140	SB150	SB160	SB180	SB1100	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see Fig. 1)	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	40.0							Amps
Maximum instantaneous forward voltage at 1.0A (Note 1)	$V_F$	0.55		0.70		0.75	0.83	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25^\circ\text{C}$	0.5							mA
	$T_A=100^\circ\text{C}$	10							
Typical junction capacitance (Note 3)	$C_J$	110							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	50.0							°C/W
	$R_{\theta JL}$	15.0							
Operating junction temperature range	$T_J$	-65 to +125			-65 to +150				°C
Storage temperature range	$T_{STG}$	-65 to +150							°C

#### Notes:

- (1) Pulse test: 300µS pulse width, 1% duty cycle
- (2) Thermal resistance from junction to ambient P.C.B. mounted, with 1.5X1.5"(38X38mm) copper pads
- (3) Measured 1.0MHz and reverse voltage of 4.0 volts



# RATINGS AND CHARACTERISTIC CURVES SB120 THRU SB1100

FIG.1-FORWARD CURRENT DERATING CURVE

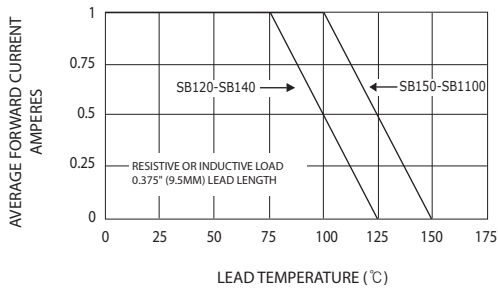


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

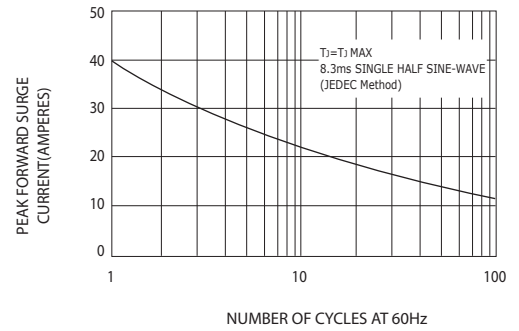


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

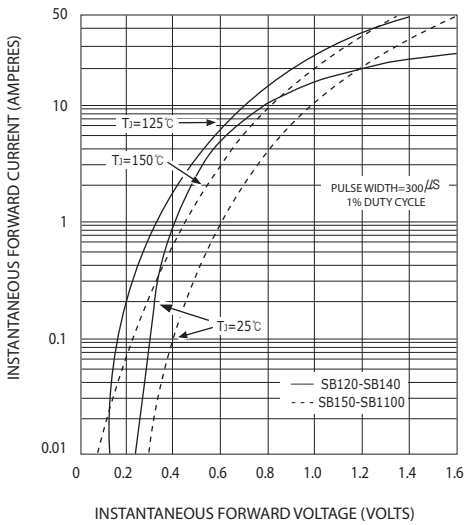


FIG.4-TYPICAL REVERSE CHARACTERISTICS

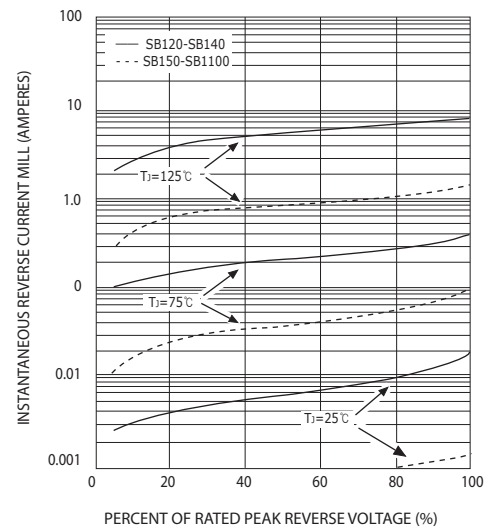


FIG.5-TYPICAL JUNCTION CAPACITANCE

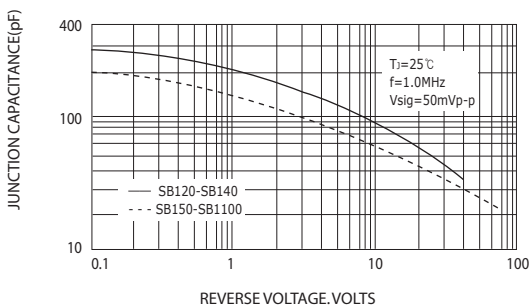


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

